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## Developing Applications with Google Cloud

**Duración: 3 Días**    **Código del Curso: GO6593**    **Version: 1.2.2**    **Método de Impartición: Curso Remoto (Virtual)**

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### Temario:

In this course, application developers learn how to design, develop, and deploy applications that seamlessly integrate components from the Google Cloud ecosystem. Through a combination of presentations, demos, and hands-on labs, participants learn how to use GCP services and pre-trained machine learning APIs to build secure, scalable, and intelligent cloud-native applications.

#### Curso Remoto (Abierto)

Nuestra solución de formación remota o virtual, combina tecnologías de alta calidad y la experiencia de nuestros formadores, contenidos, ejercicios e interacción entre compañeros que estén atendiendo la formación, para garantizar una sesión formativa superior, independiente de la ubicación de los alumnos.

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### Dirigido a:

Application developers who want to build cloud-native applications or redesign existing applications that will run on Google Cloud Platform.

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### Objetivos:

- This course teaches participants the following skills:
  - Use best practices for application development
  - Choose the appropriate data storage option for application data
  - Implement federated identity management
  - Develop loosely coupled application components or microservices
  - Integrate application components and data sources
  - Debug, trace, and monitor applications
  - Perform repeatable deployments with containers and deployment services
  - Choose the appropriate application runtime environment; use Google Container Engine as a runtime environment and later switch to a no-ops solution with Google App Engine Flex
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### Prerequisitos:

To get the most out of this course, participants should have:

- Completed Google Cloud Platform Fundamentals or have equivalent experience
  - Working knowledge of Node.js
  - Basic proficiency with command-line tools and Linux operating system environments
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## Contenido:

### Module 1: Best Practices for Application Development

Code and environment management

Design and development of secure, scalable, reliable, loosely coupled application components and microservices

Continuous integration and delivery

■ Re-architecting applications for the cloud

### Module 2: Google Cloud Client Libraries, Google Cloud SDK, and Google Firebase SDK

How to set up and use Google Cloud Client Libraries, Google Cloud SDK, and Google Firebase SDK

■ Lab: Set up Google Client Libraries, Google Cloud SDK, and Firebase SDK on a Linux instance and set up application credentials

### Module 3: Overview of Data Storage Options

Overview of options to store application data

■ Use cases for Google Cloud Storage, Google Cloud Datastore, Cloud Bigtable, Google Cloud SQL, and Cloud Spanner

### Module 4: Best Practices for Using Cloud Datastore

Best practices related to the following:

Queries

Built-in and composite indexes

Inserting and deleting data (batch operations)

Transactions

### Module 6: Best Practices for Using Cloud Storage

Naming buckets for static websites and other uses

Naming objects (from an access distribution perspective)

Performance considerations

Setting up and debugging a CORS configuration on a bucket

■ Lab: Store files in Cloud Storage

### Module 7: Handling Authentication and Authorization

Cloud Identity and Access Management (IAM) roles and service accounts

User authentication by using Firebase Authentication

User authentication and authorization by using Cloud Identity-Aware Proxy

■ Lab: Authenticate users by using Firebase Authentication

### Module 8: Using Google Cloud Pub/Sub to Integrate Components of Your Application

Topics, publishers, and subscribers

Pull and push subscriptions

Use cases for Cloud Pub/Sub

■ Lab: Develop a backend service to process messages in a message queue

### Module 9: Adding Intelligence to Your Application

■ Overview of pre-trained machine learning APIs such as Cloud Vision API and Cloud Natural Language Processing API

### Open API deployment configuration

■ Lab: Deploy an API for your application

### Module 12: Deploying an Application by Using Google Cloud Build, Google Cloud Container Registry, and Google Cloud Deployment Manager

Creating and storing container images

Repeatable deployments with deployment configuration and templates

■ Lab: Use Deployment Manager to deploy a web application into Google App Engine flexible environment test and production environments

### Module 13: Execution Environments for Your Application

Considerations for choosing an execution environment for your application or service:

Google Compute Engine

Kubernetes Engine

App Engine flexible environment

Cloud Functions

Cloud Dataflow

■ Lab: Deploying your application on App Engine flexible environment

### Module 14: Debugging, Monitoring, and Tuning Performance by Using Google Stackdriver

Stackdriver Debugger

Stackdriver Error Reporting

Lab: Debugging an application error by using Stackdriver Debugger and Error Reporting

<p>Error handling</p> <p>Bulk-loading data into Cloud Datastore by using Google Cloud Dataflow</p> <p>■ Lab: Store application data in Cloud Datastore</p> <p>Module 5: Performing Operations on Buckets and Objects</p> <p>Operations that can be performed on buckets and objects</p> <p>Consistency model</p> <p>■ Error handling</p>	<p>Module 10: Using Cloud Functions for Event-Driven Processing</p> <p>Key concepts such as triggers, background functions, HTTP functions</p> <p>Use cases</p> <p>Developing and deploying functions</p> <p>■ Logging, error reporting, and monitoring</p> <p>Module 11: Managing APIs with Google Cloud Endpoints</p>	<p>Stackdriver Logging</p> <p>Key concepts related to Stackdriver Trace and Stackdriver Monitoring.</p> <p>Lab: Use Stackdriver Monitoring and Stackdriver Trace to trace a request across services, observe, and optimize performance</p>
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## Más información:

Para más información o para reservar tu plaza llámanos al (34) 91 425 06 60

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